USFS CLARKIA WORK CENTER (PWS# 1400061)
SOURCE WATER ASSESSMENT REPORT

March 21, 2002

State of Idaho
Department of Environmental Quality

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Idaho Department of Environmental Quality (DEQ) is completing the assessments for all Idaho public drinking water systems. The assessment for your particular drinking water source is based on a land use inventory within a 1,000 foot radius of your drinking water source, sensitivity factors associated with the source, and characteristics associated with either your aquifer or watershed in which you live.

This report, *Source Water Assessment for USFS Clarkia Work Center (PWS# 1400061) located in Clarkia, Idaho*, describes the public drinking water system, the associated potential contaminant sources located within a 1,000 foot boundary around the drinking water source, and the susceptibility (risk) that may be associated with any potential contaminants. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this system. **The results should not be used as an absolute measure of risk and are not intended to undermine the confidence in your water system.**

The USFS Clarkia Work Center drinking water system consists of one well, which was drilled in 1962. The well was initially abandoned due to high iron content, but in 1981 an iron filter was installed and the well has been used since that time. When fully occupied, the work center serves approximately 50 people.

The water system samples monthly for total coliform bacteria, as required by the USFS. Except for an episode of total coliform contamination in September and October of 2001, the well has not experienced significant contamination problems. The well is also tested yearly for nitrate and every nine years for nitrite. Both are at acceptable levels. In 2001 the well was evaluated to determine if it is Groundwater Under the Direct Influence of Surface Water (GWUDI). The well was determined to be potentially GWUDI and further monitoring is required. The water system should contact IDEQ for assistance in completing this monitoring.

The well was assigned a moderate hydrologic sensitivity score. The well is located in an area of well-drained soil, which provides some protection from contaminants moving through the ground.

The well's system construction score is high. The well is 220' deep. There is no well driller's report available to confirm proper well construction and the well is located within the 100-year floodplain. However, the well has been surveyed regularly and is in good repair. The wellhead is fitted with a sanitary seal.

There are three potential contaminant sites located within the well's source water assessment area. All three sites may be a source of inorganic contaminants, there for the well was assigned a high potential contaminant/land use score in the inorganic chemical category. The well scored low in the remaining chemical categories.

The well's overall susceptibility score was moderate in all categories. A copy of the susceptibility analysis, along with a map showing any potential contaminant sources, is included with this summary. Information regarding the potential contaminants within the 1,000-foot boundary have been summarized and included in Table 1.

Table 1.

SITE #	Source Description	Source of Information	Potential Contaminants[1]
1	Wastewater Land Application Site	Database Search	IOC, Microbial
2	Sewage Lagoons	Enhanced Inventory	IOC, Microbial
3	Railroad	Enhanced Inventory	IOC, VOC, SOC

[1]IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Figure 1. Geographic Location of the USFS Clarkia Work Center Well

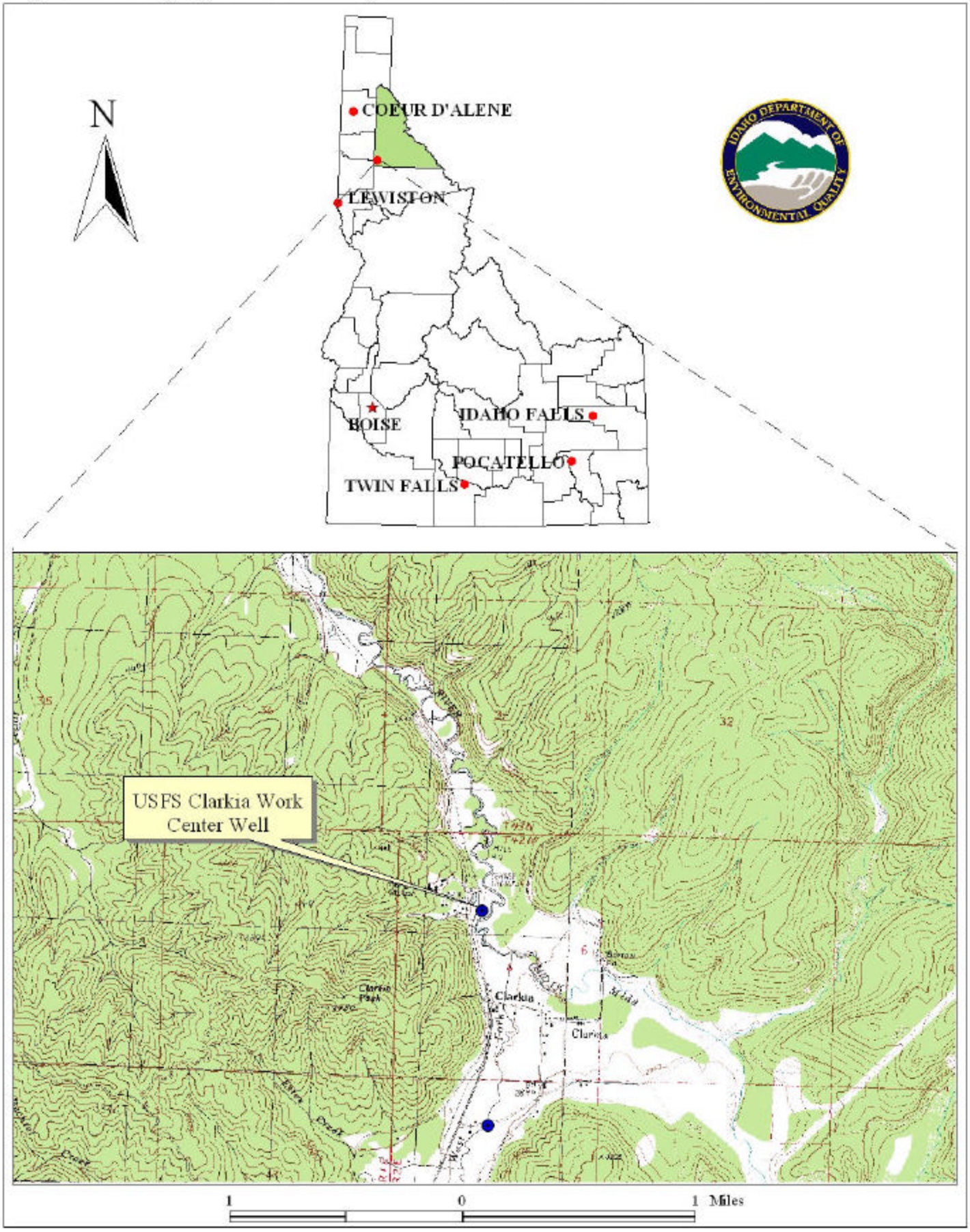
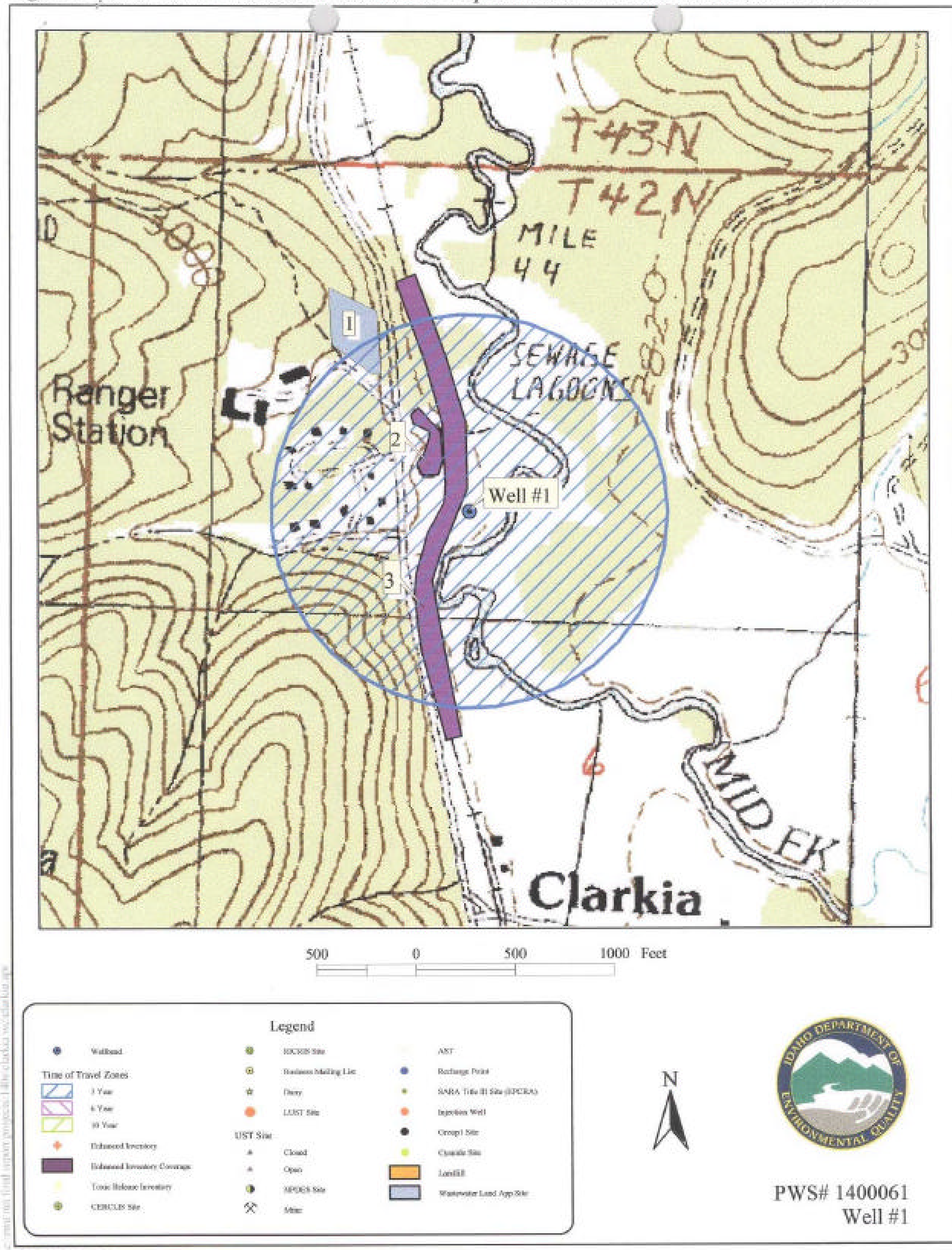


Figure 2. USFS Clarkia Work Center Delineation Map and Potential Contaminant Source Locations



MAR 21 2002, 9:54

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

USFS Clarkia Work Center should focus drinking water protection activities on implementation of practices aimed at maintaining water quality. The water system should develop drinking water protection plan with public education, potential contaminant site management and contingency components. Public education might include visually identifying the drinking water protection area with signs or diagrams, and encouraging residents to properly dispose of household hazardous waste. The nearby sewage lagoon should continue to be monitored for proper operation so as not to become a threat to the well. Contingency planning is important, especially in light of the railroad located adjacent to the well and the potential of a contaminant spill. The contingency plan should outline the roles and responsibilities of system members in the event of an emergency and identify an alternative source of water. Drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

For assistance in developing drinking water protection (formerly wellhead protection) strategies please contact Shantel Aparicio or Sheila Bruning at the Coeur d'Alene regional IDEQ office at (208) 769-1422.

DEQ Website:

http://www.deq.state.id.us

Attachment A

USFS Clarkia Work Center
Susceptibility Analysis
Worksheet

The final scores for the susceptibility analysis were determined using the following formulas:

1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)

2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.375)

Ground Water Final Susceptibility Scoring

0-5 = Low Susceptibility

6-12 = Moderate Susceptibility

> 13 = High Susceptibility

Ground Water Susceptibility Report Public Water System Name : USFS CLARKIA WORK CENTER Well# : WELL #1

Public Water System Number 1400061 3/21/02 1:17:14 PM

1. System Construction		SCORE
Drill Date	1962	
Driller Log Available	NO	
Sanitary Survey (if yes, indicate date of last survey)	YES	2001
Well meets IDWR construction standards	N/A	1
Wellhead and surface seal maintained	YES	0
Casing and annular seal extend to low permeability unit	N/A	2
Highest production 100 feet below static water level	UNKNOWN	1
Well located outside the 100 year flood plain	NO	1
	Total System Construction Score	5

2. Hydrologic Sensitivity		
Soils are poorly to moderately drained	YES	0
Vadose zone composed of gravel, fractured rock or unknown	YES	1
Depth to first water > 300 feet	NO	1
Aquitard present with > 50 feet cumulative thickness	NO	2
	Total Hydrologic Score	4

3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	RURAL	0	0	0	0
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		0	0	0	0

Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	3	1	1	2
(Score = # Sources X 2) 8 Points Maximum		6	2	2	4
Sources of Class II or III leachable contaminants or	YES	3	1	1	
4 Points Maximum		3	1	1	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		9	3	3	4
Cumulative Potential Contaminant / Land Use Score		9	3	3	4
4. Final Susceptibility Source Score		11	10	10	11
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate

POTENTIAL CONTAMINANT INVENTORY
LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as ASuperfund@ is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (IDEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by IDEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.